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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,343

08/24/2006

Marc Peuker

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EXAMINER

ROSEN, ERIC J

ART UNIT

PAPER NUMBER

3732

NOTIFICATION DATE

DELIVERY MODE

04/14/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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LegalDocketing@mmm.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/598,343	PEUKER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	ERIC ROSEN	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 20 and 22-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20 and 22-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22, 24, 25, 27, 31, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Broyles et al (US 5735437).

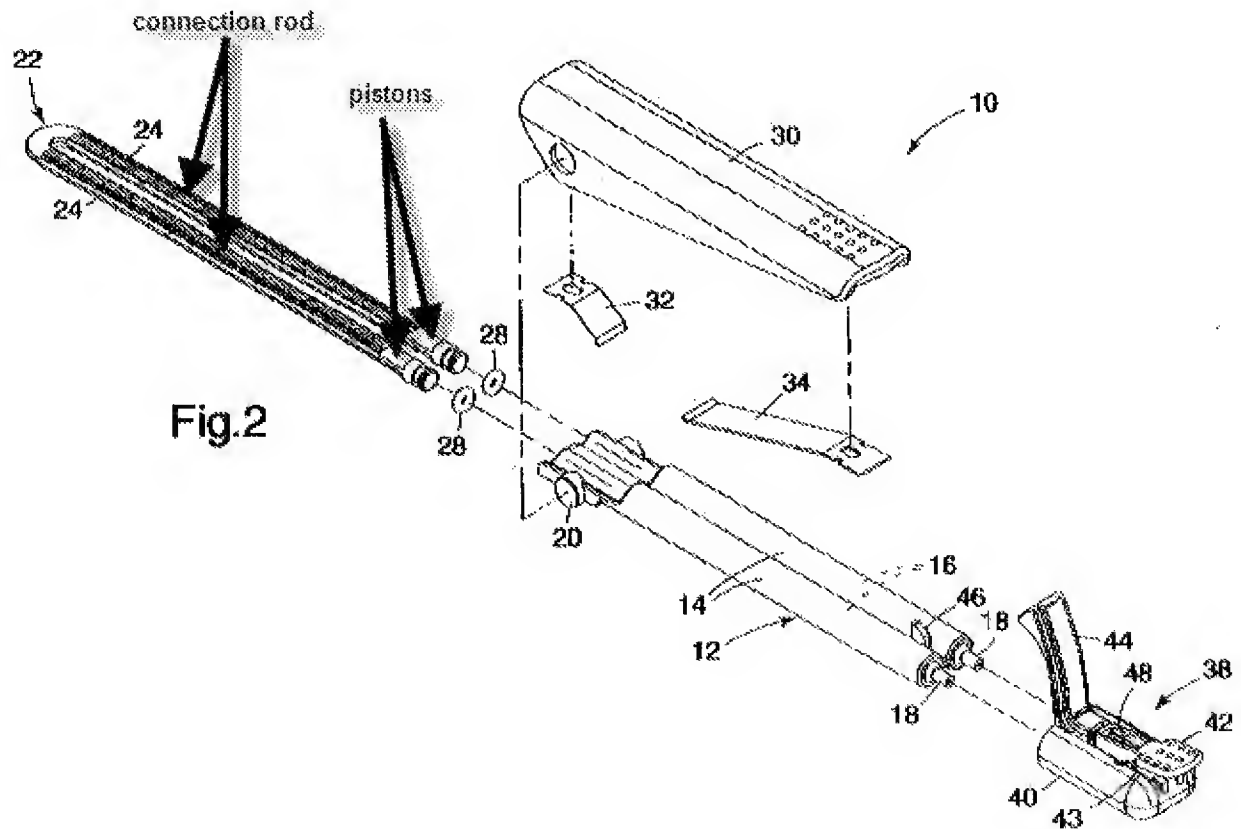
Regarding claims 22 and 24, Broyles discloses a delivery system 10/38 (figure 2) and 60 (figure 6) for controlled dispensing of a substance, the system comprising: a cartridge 12/22 having at least two compartments for storing material components to form a substance; a plunger 22 having at least two pistons (see “pistons” in figure 2 below) for sealing the respective compartments and advancing the material components in the at least two compartments; and a lever 30 and a geared connection rod (see “connection rod” in figure 2 below)) for providing controlled dispensing of the substance, wherein the lever is integrally formed with at least a part of the cartridge (see figure 2; the lever 30 is integrally formed with element 20 of the cartridge during assembly), and wherein the geared connection rod (see "connection rod" in figure 2 below) is integrally formed with the plunger 22.

Regarding claim 27, Broyles further discloses a reservoir 60 (figure 6) for receiving the mixed substance).

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Regarding claim 31, Broyles further discloses the cartridge comprises an actuator part 22 (element 20 also serves as an actuator part; figure 2) and a material receptacle 12 having at least two compartments 14 for storing material components, the material receptacle being separable from the actuator part (element 22 is shown to be separable in figure 2; element 20 is separable if broken from the cartridge).

Regarding claim 33, Broyles further discloses a substance for the treatment of caries (Col. 1, lines 45-46).



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20, 25, 27, 31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broyles and in view of Dai et al (US 20070060894 A1).

Regarding claim 20, Broyles discloses the claimed invention substantially as claimed, as set forth above for claims 22 and 24. Broyles is silent regarding the delivery system comprising a self-opening closure system which seals the front ends of the compartments and would open when the plunger is advanced. However, Dai teaches a self-opening closure system 80 (figure 4) which seals the front end of a compartment and opens when a plunger is advanced (paragraph 0044). Therefore, it would be obvious to one of ordinary skill in the art, at the time the invention was made, to modify Broyles to include a self-opening closure system which seals the front ends of the compartments and would open when the plunger is advanced, as taught by Dai, for the purpose of keeping the dispenser from leaking while not in use.

Claims 20, 25, and 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen et al (US 20040024353 A1) in view of Dai et al (US 20070060894 A1).

Regarding claim 20, Petersen discloses a delivery system 10 (figure 1) for controlled dispensing of a substance, the system comprising: a cartridge 12 (figure 2)

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having at least two compartments 18/16 (figure 2) for storing material components that may be mixed to form a substance; a plunger 50 (figure 2) having at least two pistons 32/44 (figure 2) for sealing the respective compartments and advancing the material components in the at least two compartments; and a lever 58 (figure 4) and a geared connection rod 94 (figure 4B) for providing controlled dispensing of the substance.

Petersen further discloses the lever 58 (figure 3) is attached (indirectly) to a sleeve 66 (figure 3) and a pawl 98 engages with the lever so that upon each push of the lever, the pistons are caused to move forward, providing controlled dispensing of the substances.

Petersen also discloses wherein by pressing the lever, a pawl 98 (figure 4) engages with the connecting rod 94 (figure 4B; on underside of element 76 in figure 4) and thereby activates a plunger 50 (figure 2), and a piston 32/44 is moved forward.

Petersen is silent regarding the delivery system comprising a self-opening closure system which seals the front ends of the compartments and would open when the plunger is advanced. However, Dai teaches a self-opening closure system 80 (figure 4) which seals the front end of a compartment and opens when a plunger is advanced (paragraph 0044). Therefore, it would be obvious to one of ordinary skill in the art, at the time the invention was made, to modify Petersen to include a self-opening closure system which seals the front ends of the compartments and would open when the plunger is advanced, as taught by Dai, for the purpose of keeping the dispenser from leaking while not in use.

Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Epstein et al (US 6007515) in view of Dai et al (US 20070060894 A1).

Regarding claim 20, Epstein discloses a delivery system (figure 3) for controlled dispensing of a substance, the system comprising: a cartridge 30 having at least two compartments for storing material components that may be mixed to form a substance; a plunger 40 having at least two pistons 44 (figures 3 and 15) for advancing the material components in the at least two compartments; and a lever 22 and a geared connection rod 50 for providing controlled dispensing of the substance.

Epstein is silent regarding the delivery system comprising a self-opening closure system which seals the front ends of the compartments and would open when the plunger is advanced. However, Dai teaches a self-opening closure system 80 (figure 4) which seals the front end of a compartment and opens when a plunger is advanced (paragraph 0044). Therefore, it would be obvious to one of ordinary skill in the art, at the time the invention was made, to modify Epstein to include a self-opening closure system which seals the front ends of the compartments and would open when the plunger is advanced, as taught by Dai, for the purpose of keeping the dispenser from leaking while not in use.

Claims 23, 25, 27, 31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broyles and in view of Lokhandwala et al (US 20030186190 A1).

Regarding claim 23, Broyles discloses the claimed invention substantially as claimed, as set forth above for claims 22 and 24. Broyles is silent regarding the lever

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and pawl being adapted to reset to their original positions after each activation without the presence of additional springs. However, Lokhandwala teaches a dispensing device comprising a lever and a pawl which are adapted to reset to their original positions after each activation without the presence of additional springs (paragraph 0019). Therefore it would be obvious to one of ordinary skill in the art, at the time the invention was made to modify Broyles by configuring the lever and pawl to reset to their original positions after each activation without the presence of additional springs, as taught by Lokhandwala, for the purpose of making the device simpler to manufacture.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Epstein, in view Dai, and further in view of Lokhandwala.

Regarding claim 26, Epstein/Dai discloses the claimed invention substantially as claimed, as set forth above for claim 20. Epstein/Dai is silent regarding a reinforcement member for hindering possible backlash movement of the connection rod, wherein a pawl is adapted to lift the reinforcement member and thereby release the connection rod. However, Lokhandwala teaches a reinforcement member 126 for hindering possible backlash movement of the connection rod 122, wherein a pawl 152 is adapted to lift the reinforcement member and thereby release the connection rod (Figure 1; paragraph 0019; the reinforcement member 126 is released with each stroke of the lever, wherein the pawl 152 pivots forward so as to push the plunger 120 forward). Therefore, it would be obvious to one of ordinary skill in the art, at the time the invention was made, to modify Epstein/Dai by including a reinforcement member for hindering



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possible backlash movement of the connection rod, wherein a pawl is adapted to lift the reinforcement member and thereby release the connection rod, as taught by Lokhandwala, for the purpose of preventing unwanted movement of the lever.

Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen, in view of Dai, and further in view of Fukui (US 6544233 B1).

Regarding claims 28, 29, and 30, Petersen/Dai discloses the claimed invention substantially as claimed, as set forth above for claims 20 and 27. Petersen is silent regarding the reservoir comprising a sleeve which is movable over the exterior surface of the cartridge and a cavity for receiving the substance exiting the cartridge, the cavity being formed by the interior surface of the sleeve and the exterior surface of the cartridge, wherein the cartridge is caused to move forward toward the cavity thereby providing controlled dispensing of the substance. However, Fukui teaches a reservoir comprising a sleeve 1 (figure 1A) which is movable over the exterior surface of a cartridge 6 (figures 1A and 1B) and a cavity 9 for receiving the substance exiting the cartridge, the cavity 9 being formed by the interior surface of the sleeve 1 and the exterior surface of the cartridge 6, wherein the cartridge is caused to move forward toward the cavity (figures 1A and 1B) thereby providing controlled dispensing of the substance. Therefore, it would be obvious to one of ordinary skill in the art, at the time the invention was made to modify Petersen/Dai by including the sleeve and integral parts, as taught by Fukui, with the cartridge disclosed by Petersen, for the purpose of allowing two substances to mix prior to being dispensed from the device. Upon

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modification of Petersen/Dai, as described above, the cartridge would act as a piston and be moved forward into the reservoir just as the pistons disclosed by Petersen are activated (as described above for claim 1).

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broyles and in view of Simonton et al (US 20040072123 A1); Broyles, in view of Dai, and further in view of Simonton; Broyles, in view of Lokhandwala, and further in view of Simonton.

Regarding claim 32, Broyles, Broyles/Dai, and Broyles/Lokhandwala disclose the claimed invention substantially as claimed, as set forth above for claims 22 and 24, 20, and 23, respectively. Broyles, Broyles/Dai, and Broyles/Lokhandwala are silent regarding the system further comprising a brush. However, Simonton teaches a brush 32 (Figure 1) attached to a material dispenser. Therefore, it would be obvious to one of ordinary skill in the art, at the time the invention was made, to modify Broyles, Broyles/Dai, and/or Broyles Lokhandwala by attaching a brush to the system, as taught by Simonton, for the purpose of helping to facilitate the precise application of material (paragraph 0018).

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broyles, in view of Simonton, and further in view of Ferguson (US 6264619 B1); Broyles, in view of Dai, further in view of Simonton, and further in view of Ferguson; Broyles, in view of Lokhandwala, further in view of Simonton, and further in view of Ferguson.

Regarding claim 34, Broyles/Simonton, Broyles/Dai/Simonton, and Broyles/Lokhandwala/Simonton disclose the system according to claim 33, but is silent regarding a kit with a system according to claim 33, further comprising a glove. However, Ferguson teaches a kit 10 that holds a dispensing system 30 ("syringe") and a glove 52 (Figure 1). Therefore, it would be obvious to one of ordinary skill in the art, at the time the invention was made, to modify Broyles/Simonton, Broyles/Dai/Simonton, and/or Broyles/Lokhandwala/Simonton by putting it in a kit with a glove, as taught by Ferguson, for the purpose of transporting the items together.

### ***Response to Arguments***

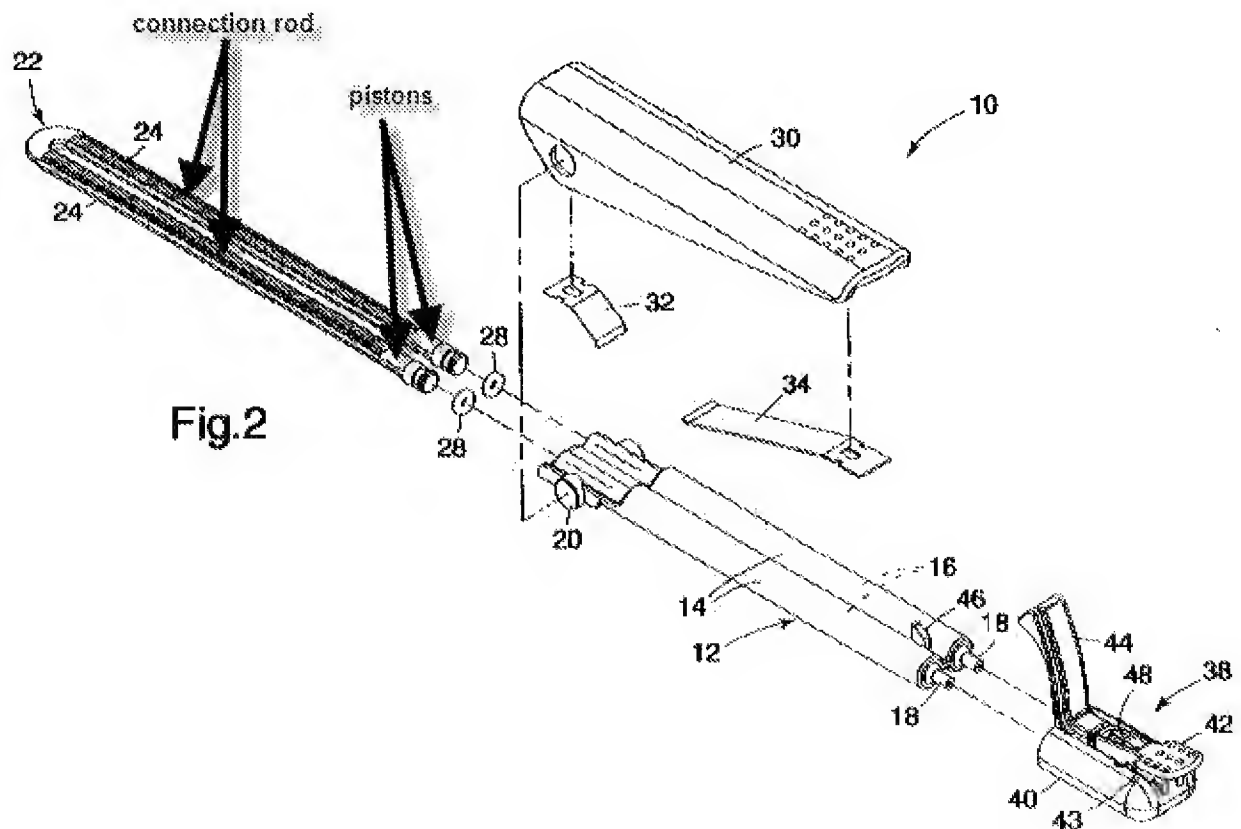
Applicant's arguments filed 9/03/2009 have been fully considered but they are not persuasive.

In response to Applicant's argument that the substance of Broyles is not disclosed, the Examiner respectfully disagrees. Broyles disclose that the device can be used with composition made up of two or more parts, where in the composition could be dental sealant (Col. 1, lines 45-56). Furthermore, the claims of the present application only claim that the delivery system is **for controlled dispensing of a substance**, wherein the system is **adapted to mix the components to form a substance**. A substance is therefore not positively claimed. Only a delivery system **capable of being used** for controlled dispensing of a substance is claimed. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from

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the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Broyles discloses a device that is capable of being used for controlled dispensing of a substance.

In response to Applicant's argument that Broyles does not disclose both the claimed pistons and the claimed connection rod, the Examiner respectfully disagrees. Broyles discloses a device comprising pistons (see "pistons" in figure 2 below) as well as a geared connection rod (see "connection rod" in figure 2 below). There are no limitations in the claims as to the location of the pistons or the geared connection rod, nor are there any limitations in the claims preventing the pistons and geared connection rod from being attached to each other.



In response to Applicant's argument that Peterson does not disclose pistons for sealing at least two compartments, the Examiner respectfully disagrees. Peterson discloses pistons 32/44 with piston ends 26/38, which are configured to advance material components 22/36 in the compartments 24/34. It can also be seen in figure 2 that the pistons/piston ends seal the compartments since the piston ends since they match the contours of the compartment openings. Furthermore, the pistons/piston ends inherently seal the compartments because they would not be able to function properly in advancing material through the compartments if material was able to pass between the piston ends and the walls of the compartments.

In response to Applicant's argument that Boyles does not disclose a self-opening closure system (as previously claimed in claim 21), the Examiner finds this argument moot, since claim 21 was previously rejected under Boyles and in view of Dai, wherein Dai teaches a self-opening closure system as claimed, and wherein it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Boyles by including a self-opening closure system, as taught by Dai, for the purpose of preventing the device from leaking material when not in use.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC ROSEN whose telephone number is (571)270-7855. The examiner can normally be reached on Monday-Friday, 9am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571)272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ERIC ROSEN/  
Examiner, Art Unit 3732

/Cris L. Rodriguez/  
Supervisory Patent Examiner, Art Unit 3732